



Implementing the Hazardous Waste Electronic Manifest Establishment Act (e- Manifest)

Program Update
December 2015



Welcome to EPA's Webinar on e-Manifest!

- Phone lines are muted.
- Webinar recording.
- Webinar questions process.
- EPA Speaker Introductions.



Webinar Overview

- e-Manifest Benefits
- History, Background, and e-Manifest Act Highlights
- Regulatory Update/Progress
- Advisory Board Update/Progress
- Technical Architecture and Planning
- System Development Update/Progress
- Acquisition
- High Level Schedule
- Q&A
- Ongoing Communications & Outreach

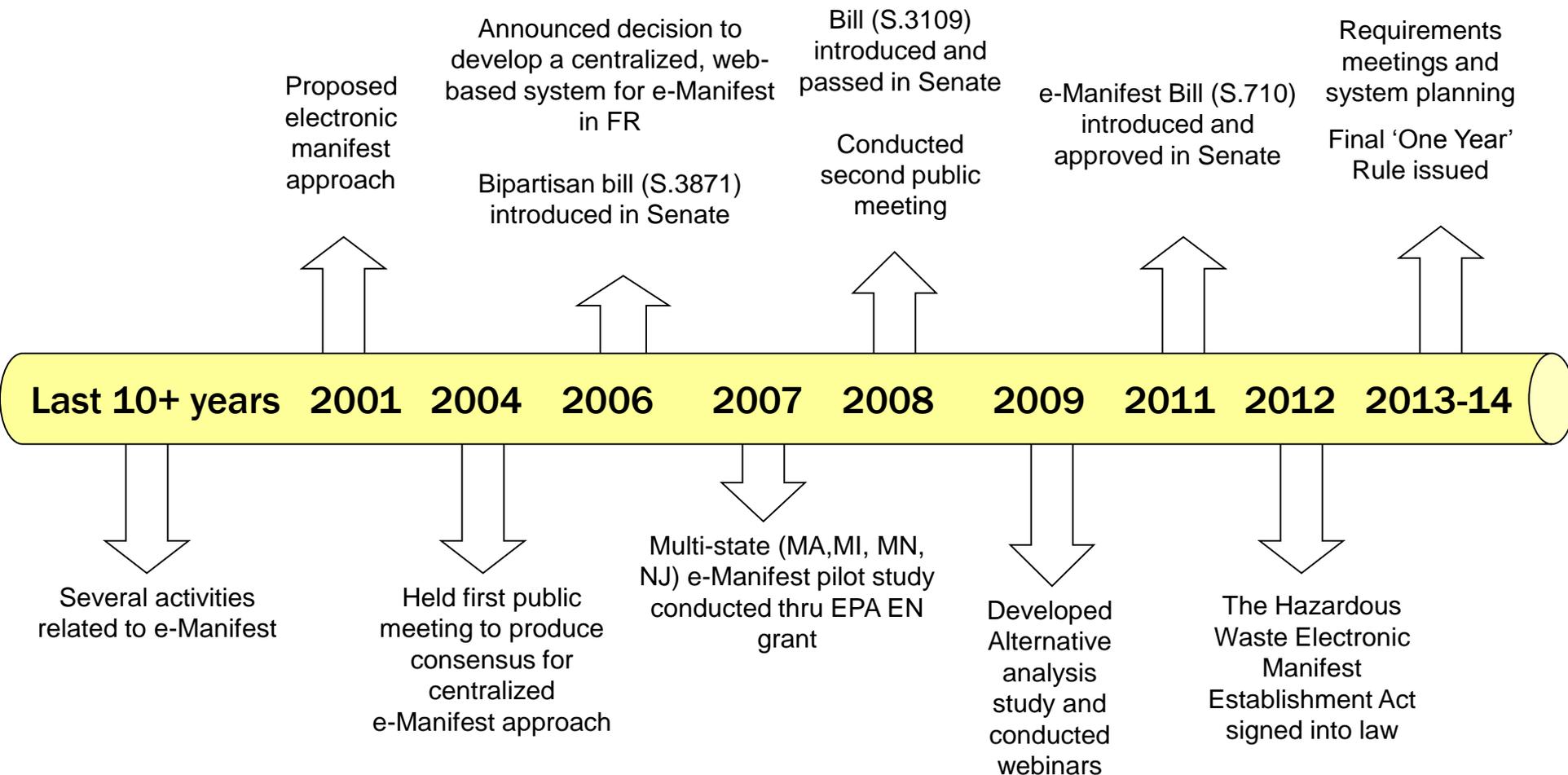


Benefits

- EPA estimates the national e-Manifest system will ultimately reduce the burden associated with preparing shipping manifests by between 300,000 and 700,000 hours.
- Result in cost savings of more than \$75 million per year for states and industry.
- The e-Manifest system will:
 - Significantly improve access to higher quality and more timely waste shipment data.
 - Empower communities through increased transparency.
 - Provide more accurate information on completed waste shipments and management trends.



History of e-Manifest





e-Manifest Background

- The current paper-based hazardous waste manifest system
 - Set of forms, procedures designed to track hazardous waste shipments from “cradle-to-grave.”
 - Records information on types, quantities, hazmat description, and routing
 - 6-copy form must be completed, physically carried, signed, filed, and mailed
 - Manifest satisfies both EPA's and DOT's requirements for a shipping document.
- Primary External Stakeholders
 - Hazardous waste industry handlers (small and large generators, transporters, TSDFs, brokers).
 - Hazardous waste industry IT staff.
 - State/tribal RCRA/Hazardous waste program staff.
 - State/tribal IT staff.
 - U.S. Department of Transportation.



e-Manifest Act Highlights

- “Hazardous Waste Electronic Manifest Establishment Act” enacted October 2012.
- Directs EPA to establish (and own) a national hazardous waste electronic manifest tracking system.
 - Requires manifests to be sent to and managed in the new EPA system
 - Covers all federal and state wastes subject to manifest.
 - Includes collection of electronic and paper manifests.
 - Use of electronic manifests is optional for users.
 - No requirement to submit manifests to EPA previously.
- Authorizes EPA to charge a user fee for all hazardous waste handlers that use this new system
 - User fees will offset system development, and operations & maintenance costs.



e-Manifest Act Highlights

- Act directs EPA to issue implementing regulations within 1 yr of enactment
 - EPA responded in Feb. 2014 with “1-Year Rule” to authorize electronic manifest use.
 - Electronic manifests used in accordance with rule are legal equivalent of paper manifests.
 - Codifies scope provisions of Act and requirements for consistent implementation in states.
 - Requires submission of final TSDf copy of any paper manifests for data processing.
- User Fee regulation is a distinct regulation now under development – rule will establish the parameters for fee collection that will fund the e-Manifest system.
- Act directs EPA to establish a 9-member Advisory Board (FACA committee)
 - Includes EPA Chair, 2 IT experts, 3 users from industry, and 3 state program reps.
 - Purpose: to make recommendations on system effectiveness and user fees.
- Act provides measures of effective System Performance:
 - Meets the needs of the user community including States that rely on data.
 - Attracts sufficient user participation and service fee revenues to ensure the viability of the system.
 - Decreases the administrative burden on the user community.



Regulatory Development, User Fee Rule

- EPA workgroup has been working closely with state and industry users as well as other stakeholders in developing a Notice of Proposed Rulemaking (NPR).
- The User Fee Proposed Rule is now completing its Final Agency Review (FAR).
 - Final phase of internal development at EPA.
 - OMB Review is next milestone and final step before publication.
- Major questions the proposed regulation will answer:
 - What model or formula will we use to calculate fees?
 - Which e-Manifest “users” will be charged fees?
 - Will fees be transaction based or have some other basis?
 - What is the most efficient fee collection point in the business process?
 - Are there transactions that warrant a fee premium?
 - What collection and payment methods will be used?
 - How to address fee “trajectory” and fee schedule revisions?
 - What sanctions for non- or late payment?



User Fee Rule Principles

- Keep the fee structure as simple as possible.
- Accomplish full cost recovery.
- Act's definition of "user" likely precludes charging states or the public fees for their access to manifest data.
- Fee system should not disrupt industry relationships with generators and their activities as manifest service providers.
- Fee schedule should reinforce message that electronic manifests are preferred
- Fee trajectory factors (e.g., CPI) should be built into initial fee system.



Regulatory Development, User Fee Rule

- Proposed Fee Rule will set out fee setting methodology for comment.
 - Proposed formula showing how program costs will be allocated to manifests.
 - Differential fees likely based on manifest type (electronic vs. paper) & how submitted.
- NPR to be published for comment by spring 2016.
- Final rule will announce initial fee schedule and announce date system will be implemented.
 - Fee schedules will be thereafter published to program web site, not codified in rule.
- Goal: Issue Final Fee Rule approximately 90 days prior to system implementation/deployment.



e-Manifest Advisory Board

- 9 member e-Manifest Advisory Board (Federal Advisory Committee Act - FACA).
- Administrator (or designee) Chair, 3 state personnel, 3 users of the system, 2 IT professionals.
- Purpose is to make recommendations on system effectiveness and user fees.
- Filed FACA Charter with congress August 2015.
- Board selection process still underway – expect announcement after the new year.
- First Board meeting likely spring 2016.

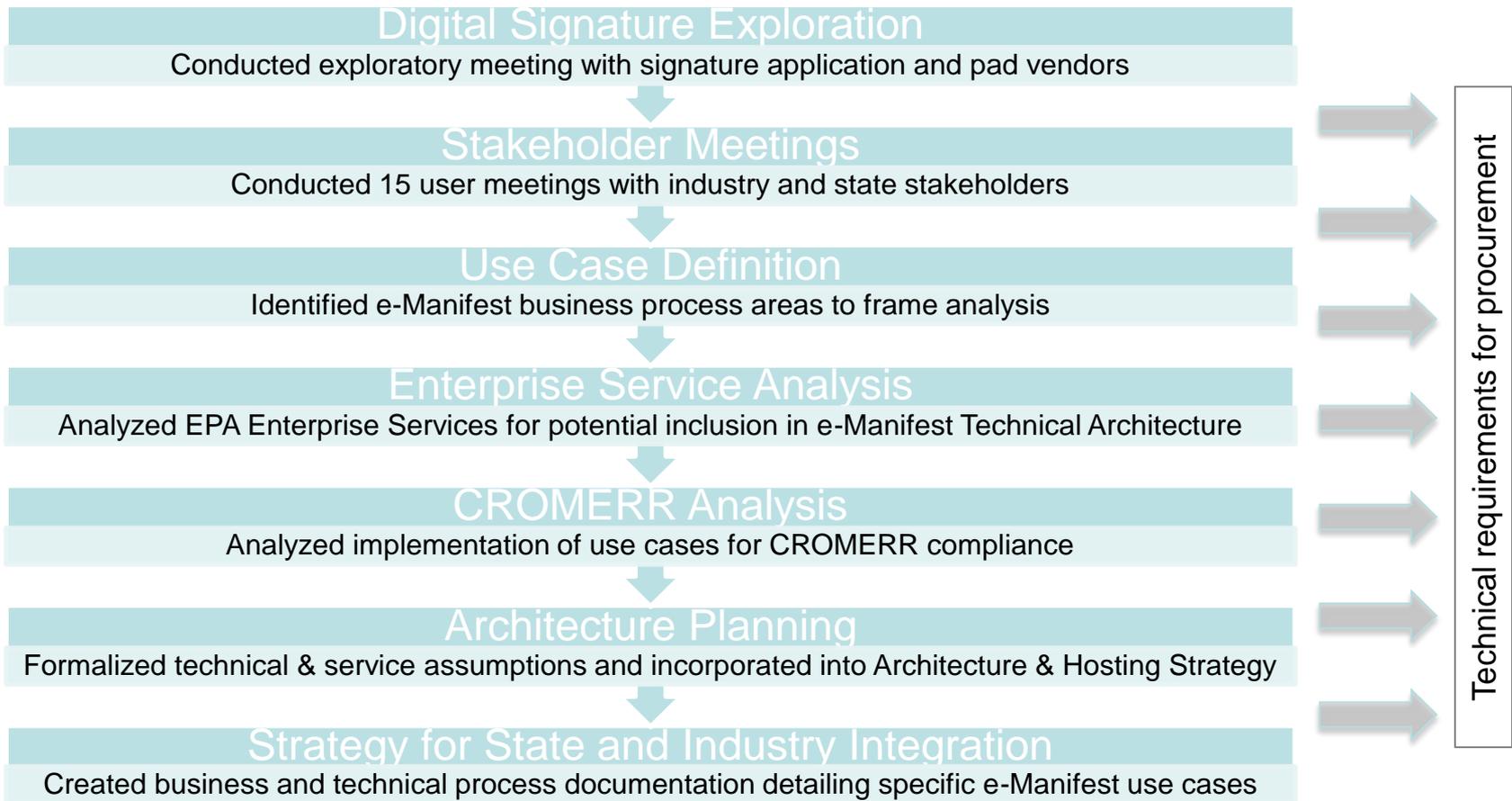


Assumptions for e-Manifest Technical Architecture

- Must not hinder the commercial transaction and chain of custody process.
- Every signature must be CROMERR (Cross Media Electronic Reporting Rule) compliant
 - Implementation must be as practical and cost-effective as possible for user community.
- Leverage EPA Shared Services, specifically CDX for CROMERR and non-CROMERR functions.
- As per “One year” rule preamble, digitized and witnessed signature must be considered (in addition to standard CROMERR options).



Technical Planning Overview





Conceptual Technical Architecture

Architecture is service-oriented, allowing e-Manifest to easily leverage EPA shared services

- e-Manifest Web-Based System provides a **single point of entry for web, mobile and services-based submissions**
- e-Manifest utilizes appropriate **CDX services on back-end**
- **Simplifies integration** with a broad set of EPA, state and industry technologies and systems

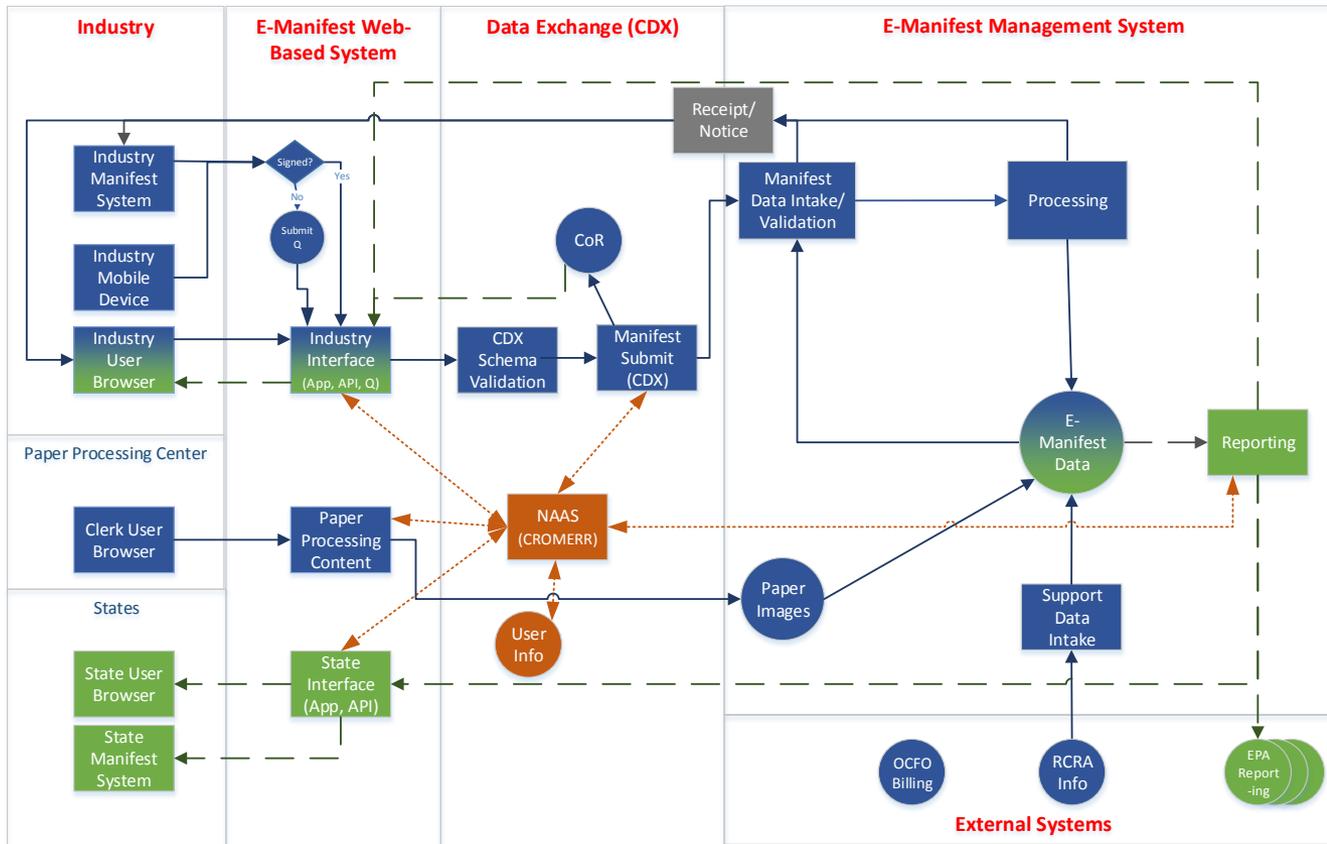
4 ways to manage manifests in e-Manifest

- **Paper:** Paper processing center
- **Web-Based System:** Industry user accessing the web-based system in an industry browser
- **System to System:** Industry system accessing industry interface API
- **Mobile App:** Industry mobile device runs e-Manifest app locally

CDX is used for registration, data exchange, signature, and COR management

- e-Manifest user profiles persisted in NAAS
- NAAS is used for authentication and authorization
- Inbound data flows through CDX
- CDX is used for pin/password signature
- COR managed and accessed using CDX services
- Service impact of digitized under consideration

Conceptual Architecture





System Development Strategy

- Using lean start-up product development strategies with agile, user-centered software design/development methodologies i.e.
 - Starting small and evolving in to a minimum viable product (MVP).
 - Address uncertainties from architecture planning work, and engage early with users and stakeholders.
 - Bring down the cost of current and future development by addressing risk upfront and insuring that the work being completed brings actual value to stakeholders and users.
 - Modular development practices.
 - Continuous improvement, using iterative processes, and regular engagement with users and stakeholders throughout the life of the program.
 - Code and progress are open source.
- User-centered design/development is underway.
 - Small scale demonstration phase.
 - Actively engaged with GSA's 18F and industry/state users in the early phases of development, and creation of development platform and hosting environment.
 - Will expand to all/every user type over time (e.g. states with no systems, large and small generators etc. etc.)



Current Work

- EPA is currently completing (through approximately March/April 2016) initial e-Manifest functionality. Currently the team is working with the GSA group 18F and will be working with EPA's CDX contract.
- Goals of the March/April Release
 - To have a system where users can voluntarily submit live data to our preproduction pre-fee rule environment.
 - By submitting live data voluntarily, users will help development in many ways.
 - The team will be able to better assess initial fees.
 - Improve future BR (biennial reporting) integration.
 - Potentially provide input on the 2017 BR.
 - Provide our developers with technical direction that is based on facts.
 - Showcase a set of e-Manifest APIs that allow a hazardous waste receiver to electronically sign a manifest, and have the COR (copy of record) electronically distributed to all handlers.



Current Work

Functionality to be delivered through March/April 2016

- EPA is focusing on the areas affecting the most manifests and the least amount of users first. For example, by rule all manifests must come to EPA from the TSDFs.
- The March/April version will contain major features of a minimally viable product e.g.
 - 1) TSDF receiving staff will be able to upload manifest data as received and electronically sign it using a CROMERR electronic signature (Password and second factor or digitized handwritten stylus/pen signature).
 - 2) TSDF users will be able to electronically update previously submitted manifest records.
 - 3) TSDF users will be able to upload a scan of a manifest for data entry.
 - 4) Provide initial data access and reporting tools to the user community.
 - 5) Electronic and Paper Manifests for a site will be accessible to authorized users.
 - 6) Continue to develop avenues for quality data through the use of shared services and reference data management.
 - 7) Appropriate security infrastructure.
 - 8) Basic role based user registration.



Acquisition Strategy

- The agency will utilize modular contracting strategies.
- Aligns with the iterative development approach and minimizes costs by breaking investments into smaller components.
- Will drive more competition, and allow smaller businesses to compete more easily.
- The EPA will engage multiple vendor teams and services with specialized capabilities to cost effectively evolve the system from beginning to a mature product.



Schedule Moving Forward – EPA’s Major Milestones

- September 2015– initial system functionality completed.
- Winter of 2016 – minimal viable product development.
 - Begin receiving live data from TSDFs.
- Spring through fall of 2016 – early full scale development.
- Fall of 2016 through winter of 2017 – rolling iterative releases/testing of system.
- Spring of 2018 – national deployment (collecting user fees).
- User fee regulatory development process completed (i.e. final rule) no later than 90 days prior to system online-deployment date.



Questions and Answers



Ongoing Communications & Outreach

- Follow our progress and/or submit input or questions through:
 - Our demonstration site: <https://e-manifest.18f.gov/>
 - Trello board: <https://trello.com/b/0geMlbgF/epa-emanifest>
 - Submit input/questions to eManifest@epa.gov
 - To subscribe to the ListServ send a blank message to: eManifest-subscribe@lists.epa.gov
- For more information on EPA's Manifest Program:
<http://www.epa.gov/osw/hazard/transportation/manifest/e-man.htm>
- Or if you prefer to discuss please contact:
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